

PATENT
Application 10/064,251
Attorney Docket 2001-0337 (1014-284)

AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for signaling in a mesh telecommunication network comprising ~~the steps of:~~ at a predetermined node in the mesh telecommunication network:
 - receiving a request to establish a label switched path through the mesh network;
 - computing a service path and a restoration path;
 - sending a label switched path request along the restoration path requesting reservation of shared resources along the restoration path without allocating the shared resources and wherein the label switched path request includes service path information;
 - and
 - responsive to a determination that the label switched path has been switched to the service path, sending a release request to a plurality of nodes along the restoration path, the release request adapted to cause a release of a restoration path resource allocation, the label switched path switched responsive to a repair of a failure of at least one component comprised by the service path, the release request an RSVP-TE protocol request comprising a shared reservation flag adapted to cause the release of the restoration path resource allocation without causing a release of reserved resources associated with the restoration path and without causing a removal of the restoration path.
2. (Original) The invention of claim 1 wherein the service path information comprises a list of links used along the service path.
3. (Original) The invention of claim 1 wherein the service path information comprises a list of shared risk link groups traversed by the service path.
4. (Original) The invention of claim 1 wherein the label switched path request is an RSVP PATH message.
5. (Original) The invention of claim 4 wherein the mesh network is an optical network.

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6. (Currently Amended) A method for signaling in a mesh telecommunication network comprising the steps of:
 - at a predetermined node in the mesh telecommunication network, bridging a signal onto both a service path and a restoration path to a destination node in the mesh network the signal bridged responsive to a request to normalize a restored connection;
 - sending a first message to the destination node requesting that the destination node bridge and roll the service path and the restoration path; and
 - if a second message is received from the destination node confirming that the destination node has bridged and rolled the service path and the restoration path, halting transmissions along the restoration path and sending a third message to the destination node confirming that the connection is normalized, the second message an RSVP-TE protocol message comprising an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed.
7. (Original) The invention of claim 6 wherein the messages are RSVP messages.
8. (Original) The invention of claim 6 further comprising the step of verifying the service path prior to normalizing the connection.
9. (Original) The invention of claim 8 wherein the service path is verified using LMP.
10. (Currently Amended) A method for signaling in a mesh telecommunication network comprising the steps of:
 - from a predetermined node in the mesh telecommunication network, sending a second message to a source node confirming that a service path and a restoration path have been bridged and rolled, the second message sent responsive to a received first message, the first message sent responsive to a transmission of a signal, the signal

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bridged onto both the service path and the restoration path to a destination node in the mesh network, the bridged signal transmitted responsive to a request to normalize a restored connection, the second message an RSVP-TE protocol message comprising an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed; and

if a third message is received from the source node confirming that the connection has been normalized, sending a fourth message along the restoration path freeing resources reserved for the restoration path.

11. (Original) The invention of claim 10 wherein the messages are RSVP messages.
12. (Original) The invention of claim 10 further comprising the step of verifying the service path prior to normalizing the connection.
13. (Original) The invention of claim 12 wherein the service path is verified using LMP.
14. (Previously Presented) The method of claim 10, further comprising:
resolving a determined label contention associated with normalizing the connection via a downstream label assignment for a uni-directional Label Switched Path.
15. (Previously Presented) The method of claim 10, further comprising:
resolving a determined label contention associated with normalizing the connection via a higher node identification label assignment for a bi-directional Label Switched Path.
16. (Previously Presented) The method of claim 1, further comprising:
removing the reservation of shared resources along the restoration path responsive to an error message flag indicating that the restoration path could not be setup.

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17. (Previously Presented) The method of claim 1, further comprising:
reserving the resources along the restoration path if and only if the label switched path request comprises the shared reservation flag, the shared reservation flag indicative of whether other flags are needed to support restoration.
18. (Previously Presented) The method of claim 1, further comprising:
allocating the shared resources along the restoration path responsive to the failure.
19. (Previously Presented) The method of claim 1, wherein the label switched path request comprises a bit flag indicative of whether the label switched path is the service path or the restoration path.
20. (Previously Presented) The method of claim 1, wherein the label switched path request comprises a secondary bit indicative that the restoration path is a backup path for the service path.